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101 S Wasatch Drive
University of Utah
Salt Lake City, UT 84112

801-581-6625
www.kuer.org

July 29, 1999

Federal Communications Commission
MM Docket No. 99-25
Comments Re: NPRM

To Whom it May Concern,

Please find enclosed our response to the Federal Communication Commission's Notice for Proposed Rulemaking in the matter of "Creation of a Low Power radio service."

We appreciate the opportunity to express our concerns to the Commission on this very important matter. We are particulary concerned about the potential negative impact LPFM might have on KUER's translator network and thus our service to rural Utahns. If staff has any questions or would appreciate further explanation of any of our comments, we will be glad to respond as expeditiously as possible.

Respectfully,

John Greene / General Manager

Lewis Downey

Lewis Downey / Engineer

cc: Vice President Albert Gore
Senator Orrin Hatch
Senator Robert Bennett
Representative Merrill Cook
Governor Michael Leavitt

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of MM Docket No. 99-25
RM-9208
RM-9242

Creation of a Low Power Radio Service

COMMENT ON NOTICE OF PROPOSED RULE MAKING

Comment Date: July 30, 1999

By:
Lewis Downey
Engineer
John Greene
General Manager
KUER Radio
Eccles Broadcast Center
University of Utah
101 S. Wasatch Drive
Room 270
Salt Lake City, Utah
84112-1791

INTRODUCTION

1. As someone who got his start in broadcast engineering at an "alternative" community non-commercial educational radio station, with which I am still involved, I couldn't agree more

with the thesis that a diversity of voices on the airwaves and more local/community input into the content of what we hear on the radio is good for our society. I couldn't agree less with the mechanism in this Notice of Proposed Rulemaking. I will present arguments that an LPFM broadcast service, as proposed, would lead to a.) ghettoization of the urban LPFM broadcaster, ***most likely to represent ethnic minorities***, b.) damage the technical integrity of the FM broadcast band, c.) in some cases threaten the financial health and public service value of existing small market and minority broadcasters, d.) possibly threaten the future of IBOC digital audio broadcasting on the FM band as we currently understand it's proposed implementation, and, e.) ***threaten the existence of FM translators that provide a desired and valuable public service to rural areas.***

2. This proposed rule making appears to be a good faith attempt to address concerns expressed by that part of society that feels disenfranchised from current broadcast opportunities. This disenfranchisement is real, has existed since broadcasting began, and has only been deepened and exacerbated by the relatively recent phenomenon of the vast majority of radio signals being owned by relatively few entities, Jacor, Clear Channel, Capstar, Citadel, etc. This consolidation of ownership on the commercial FM dial is the direct result of various de-regulation initiatives to include the Telecommunications Reform Act of 1996. As a remedy, the FCC now proposes a delivery system that places in jeopardy a variety of existing FM services. The effects of ownership consolidation, for which the US Presidency, Congress, and the FCC [not the current leadership] are ultimately responsible, has been to only add fuel to the fire of proponents for an LPFM service.

The spread of automation and un-attended operations, both manifestations of de-regulation, has virtually eliminated entry level positions in radio, positions that traditionally provided

opportunity for the inexperienced and unskilled to explore the business of radio. **The result : no new people are being trained to run a radio station because it's cheaper to have a computer do it.** I believe diversity in the workforce, or lack thereof, is but one of many unintended consequences of broadcast de-regulation.

DISCUSSION

1. The NPRM suggests the existence of more selective FM receivers than currently assumed under FM technical rules concerning adjacent channel and IF separation. The FCC does ask for comments on whether or not a "better" FM radio, that may or may not exist yet, could select and receive signals in a more crowded FM band.[1] My discussions with an engineer who works for a major receiver manufacturer (who asked to not be identified) produced no quotable comments, partially because his opinion has not been solicited, nor has he been asked by his employer to address this question. We simply do not know what predominant receiver manufacturers would say regarding this issue. Engineers who work for broadcasters don't have the tools to quantitatively evaluate the receiver question and the FCC knows this. What follows is derived from discussion with colleagues and falls under the category "common knowledge". If future FM receiver will have to be redesigned to separate signals in an increasingly crowded FM band, it is quite likely that an adequately selective radio will be required to reproduce this tighter bandwidth output. **This decreased bandwidth equates with increased audio distortion, which would negatively impact the audio performance of newer radios in an era when FM as we currently know it is not good enough to compete for the ears of today's listeners when compared to the audio quality available on CD and DVD.**

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[1]Notice of Proposed Rulemaking, MM Docket 99-25 (February 3, 1999) page 19 paragraph 46, page 23 paragraph 56.

This proposal contains language that would place FM signals closer together on the radio dial at a pivotal time in the broadcast industry when more bandwidth, not less, may be required to provide the radio broadcast service of the future, i.e. digital radio. The development of FM transmission represented an order of magnitude improvement over AM and it has succeeded because of its technical superiority (reduced noise) and features (stereo audio). The success of FM stereo is testimony to the foresight of the visionary people at the FCC who chose the system we currently use. It was the best that technology offered when it was implemented. If digital broadcasting is to succeed it may also need to incorporate similar technical improvements and enhanced features. The improved noise performance and multipath resistance of digital radio broadcasting are the technical improvements. The enhanced feature that could secure the success of terrestrial radio DAB might be multi-channel (surround, 5.1 channel) sound.[2] Digital TV is being implemented with multichannel sound so why not digital radio? Just as the advent of the CD has lead to the replacement of vinyl recordings, the growing popularity of the "digital versatile disc" (DVD) in the home,[3] offering the capability of surround sound, is in a position to challenge the CD as the popular music format of the future. Initial indications are that IBOC as

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[2] Tomlinson Holman, TMH Corporation: at the Public Radio Conference, San Francisco, California, 1 June 1998, session entitled "Technology: The Experts Talk about the Future"

[3]The Consumer Electronics Manufacturing Association, April 6, 1998 http://www.cemacity.org/gazette/files2/dvd1year.htm
According to the Consumer Electronics Manufacturers Association (CEMA), first-year DVD player sales to U.S. dealers topped 437,000 units. ***"Not even the videocassette recorder or the compact disc player -- two of our industry's greatest success stories -- came close to these kinds of numbers when they were introduced,"*** *said CEMA President Gary Shapiro. "First-year sales of DVD players are more than twice what VCRs were during 1975-77, and more than twelve times those of CD players when they hit the market in 1983!"*

proposed ***should*** have the data bandwidth necessary to support 5.1 channel sound ***in the pure digital mode*** but not the hybrid digital-analog implementation.[4] Stereo broadcasting in the digital IBOC format is still a developing technology and multichannel is but a gleam in the developer's eye so we don't have enough data to evaluate the situation at this time. If multi-channel sound is to be the broadcast standard of DAB, especially in the IBOC implementation, then the LPFM service proposed in this NPRM may threaten that goal because of the bandwidth limitations imposed by jamming more signals into existing spectrum. This raises the question of how long will we be operating in the hybrid mode? Milford Smith, chairman of the DAB Subcommittee of NAB's National Radio Systems Committee estimates a transition phase of at least 15 years.[5] This suggests that LPFM could seriously threaten the development of IBOC/DAB before we really know how well the hybrid mode will work in the real world. It could threaten the all digital mode implementation because there could be many more signals by the time (2014?) the country is ready to go all digital radio and the restricted channel width permitted by all the extra signals could leave inadequate space for the bandwidth necessary for multichannel digital transmission. Also, because the FCC is proposing a narrower permitted occupied bandwidth for the LPFM broadcaster[6] this could disallow the entry of the LPFM licensee into the DAB arena because the bandwidth they are allowed could be inadequate for a DAB signal. Is the FCC going to order all of those hard won LPFM stations to shut down if

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[4]Lucent Technologies, Mid-Atlantic Expo/NJ Broadcasters Convention, June 1999.

[5]Radio World, May 26, 1999, page 8, "Smith estimated the transition phase to be at least 15 years, or 'as long as there is an appreciable analog receiver universe out there.'"

[6]Notice of Proposed Rulemaking, MM Docket 99-25 (February 3, 1999) page 20 paragraphs 48 & 49, page 22 paragraph 55.

we discover that IBOC can not work on an FM band cluttered with too many signals? I didn't think so. In order for DAB radio to succeed an entire nation must be convinced to purchase new radios. Is it a good idea to expect consumers to first purchase radios capable of separating the newer closely spaced FM signals to accommodate LPFM and then in a few years purchase newer radios still to receive digital FM ? How much of a challenge to the implementation of IBOC/DAB in the United States does this represent and is this wise in an era when the rest of the world is steadily implementing terrestrial and satellite DAB?

2.. There are some aspects of this NPRM that are very attractive but there are others that appear to sabotage the stated intent of establishing an LPFM service. The stated concern for "Making broadcast outlets available to more speakers..."[7] and "...promote localism and community involvement by low power and micro radio stations"[8] does not stand up to closer scrutiny of the NPRM. There are features in this NPRM that would benefit the "certain efficiencies from national multiple ownership..."[9] of LPFM's that are inconsistent with the stated intent to "...promote localism and community involvement by low power and microradio stations".[10] It is patently clear to this author that a national multiple ownership of broadcast outlets is at odds with the stated desire to foster locally based broadcast outlets that represent and

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[7]Notice of Proposed Rulemaking, MM Docket 99-25 (February 3, 1999) page 31 paragraph 83

[8]Notice of Proposed Rulemaking, MM Docket 99-25 (February 3, 1999) page 37 paragraph 107

[9]Notice of Proposed Rulemaking, MM Docket 99-25 (February 3, 1999) page 24 paragraph 60, page 25 paragraph 61.

[10]Notice of Proposed Rulemaking, MM Docket 99-25 (February 3, 1999) page 37 paragraph 107.

discuss local issues. This sounds like a replay of the recent deregulation that led to group ownership of commercial broadcast properties in the first place.[11] ***Indeed, a "...local residency or an 'integration' requirement..."[12] should be a part of any LPFM service in order to not only frustrate but prevent "...certain efficiencies from national multiple ownership..."[13] if "Making broadcast outlets available to more speakers is a fundamental premise of the rule making effort,..."[14] is truly the goal.*** I agree with the comments of Randy Wells[15] and Margie Politzer regarding LPFM 's.[16]

3.. ***Protecting existing translators that provide an essential service to rural areas should be a priority of this NPRM.*** Many non-commercial educational (NCE) stations, particularly those associated with state institutions of higher learning, operate FM translator systems to provide service to rural communities in their regions. **Often these translators were installed at**

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[11] The Telecommunications Reform Act of 1996

[12]Notice of Proposed Rulemaking, MM Docket 99-25 (February 3, 1999) page 25 paragraph 61.

[13]Notice of Proposed Rulemaking, MM Docket 99-25 (February 3, 1999) page 25 paragraph 61.

[14]Notice of Proposed Rulemaking, MM Docket 99-25 (February 3, 1999) page 31 paragraph 83.

[15] Comments to FCC in the matter of FCC RM-9242 dated April 26, 1998.
(2) I have a problem with "multiple-ownership". We don't need any more "corporations"; LPFM or otherwise. If these allocations have no takers in a given town, don't award them until there is an interested party with no other facilities. We're trying to make each station as individual and local as possible. We don't need satellite-fed LPFMs.

[16] Comments to FCC in the matter of FCC RM-9242 dated July 23, 1998
"They should be locally owned, with no more than one station owned by any one person or entity."

the request of, and sometimes funded by, these rural communities because the residents wanted a particular radio service in their communities. In the mountainous regions of the Western United States, Utah, for example, not all of the FM translators can use the signal from the NCE primary transmitter for their input. This means that many of the translators providing a local/regional service valued by local residents, are taking their signal input from a translator station serving a similar community nearer to the primary transmitter site. There has been no mention of the need to protect these ***input*** frequencies of translators on remote mountain tops that depend upon receiving a relatively weak signal from a similar low power (10 watt) translator up to 100 miles distant. It is a fragile chain that is already being challenged by the growing population of "satellators"[17] that, not so incidently, are broadcasting programming with absolutely no local/regional content. This LPFM service could wreak total havoc on an existing and valued rural FM translator system by interfering with a few select translator inputs.[18] There is no public service value in that scenario. **I propose that LPFM's should be required to protect the input frequencies of existing translators.** Regarding FM boosters, there should be no question about LPFM being required to protect another station's booster signal which, by definition, fills in coverage problem areas within a station's primary, and protected, authorized service contour[19] and should receive the same protection as the primary signal.

4. While the FCC proposes similar RFR/NEPA (radio frequency radiation hazard) standards for LPFM as those currently applied to full service stations, I'm concerned about the ability of

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[17] Satellite fed FM translators made legal in 1992. 47CFR74.1231(b)

[18] "The crowded 'Spectrum Inn' of NCE", Fred Krock, Radio World, June 23, 1999 "Problem Areas" page 10.

[19] 47CFR 74.1231(h)

the FCC to enforce these standards. The work load currently placed on the FCC field offices to to inspect and monitor Part 73 stations is considerable. Are they going to be provided with the increased personnel and resources necessary to inspect and monitor the additional transmitters? If low power implementation occurs, just imagine all those transmitting antennas on all those roof tops? Many of the LPFM transmitting antenna installations may not allow the operators to truly say that they can rely on controlled occupational exposure situations to protect unsuspecting people (neighbors) from RF exposure in excess of FCC maximum permissible exposure limits.[20] For the frequencies in question, amateur radio operators are assumed to be safe if they are operating at no more than 50 watts of effective radiated (peak envelope power) power.[21] This is partly due to the assumed technical competence of amateur radio licensees but we cannot assume a similar (or any?) technical competence on the part of LPFM applicants. In the interest of public safety, I propose that LPFM's should be required to adhere to general population/uncontrolled exposure (as opposed to "occupational/controlled exposure") limits[22] of RF radiation unless they can provide documentation that their transmitter site occupies a controlled access situation. Perhaps the LPFM's applicants should be required to submit an RF exposure evaluation modeled after that required by the amateur radio service.[23]

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[20]Evaluating Compliance with FCC Guidelines for Human Exposure to Radio-frequency Electromagnetic Fields - Additional Information for Amateur Radio Stations. OET Bulletin 65 Supplement B, Jerry Ulcek and Robert F. Cleveland, Jr. Office of Engineering and Technology, FCC., November 1997, Appendix B, Table 1.

[21]"FCC RF-Exposure Regulations -- the Station Evaluation," by Ed Hare, W1RFI (QST, January 1998, pp 50-55). Also see 47CFR 97.13(c)(1)

[22]Same as footnote 23.

[23]"FCC RF-Exposure Regulations -- the Station Evaluation," by Ed Hare, W1RFI (QST, January 1998, pp 50-55).

5. The LP-1000 class being proposed appears to be just a thinly disguised class A FM.[24] I agree with the comments of Francis A. Ney, Jr.[25] The LP-1000 class should not be allowed.

6. With regard to LPFM construction permit & license transferability[26], if the purpose of this NPRM is to allow opportunity for new people to experience the process of radio broadcasting, **then let them enjoy the entire process, including applying for and building a broadcast station.** Allowing construction permits and licenses to be transferred would also allow speculative applications and trafficking in CP's, a process that is currently tying up applications in the NCE FM band.[27] I agree with the comments of Randy Wells[28] and The Community Radio Coalition [29] in this regard.

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[24]Notice of Proposed Rulemaking, MM Docket 99-25 (February 3, 1999), page28 paragraph 72, page 29 paragraph 73,page 30 paragraph 76 & 80, page 31 paragraph 82

[25] Comments to FCC in the matter of FCC RM-9242, RM-9208, RM-9246, and Community Radio Coalition, undated .
"Since the minimum power of a Part 73 Class A FM broadcast station is 100W ERP, that should be the maximum power a station operating under new "low power" rules should transmit, all other considerations being equal."

[26] Notice of Proposed Rulemaking, MM Docket 99-25 (February 3, 1999) page 30 paragraph 79

[27]See "Broadcasting for the Challenged" at http://www.vernet.com/~beme/mx/

[28] Comments to FCC in the matter of FCC RM-9242 dated April 26, 1998.
(1) if the proposal were to be adopted, IT IS IMPERATIVE that all "profit-potential" be removed from the acquisition and selling of an LPFM. We want to keep the financial speculators out, this time. If the "trustee" is chooses to "sell" the station, he should be entitled to recoup only his actual costs. No "appreciation" allowed.

[29] Community Radio Coalition, Petition for Rule Making, March 4 1998, paragraph 13.
The petitioner believes that it is important to discourage speculation and trafficking in LPFM construction permits. To avoid trafficking, this petition proposes that the sale or transfer of LPFM construction permits be prohibited.

7. There is language in this NPRM that suggests unequal protection of the NCE reserved band (88-92 MHZ) in contrast to the remainder of the band (92-108 MHZ), occupied for the most part by commercial broadcasters. Regarding the proposed new minimum distance separations the NPRM says: "The tables consider the following interference protections:...2nd adjacent channel for reserved band frequencies and 2nd/3rd-adjacent channel for commercial band frequencies."[30] Why does the FCC talk of no 3rd adjacent protection for the NCE (reserved) band but retains the possibility for the commercial band? The entire FM band should be treated equally with regard to adjacent channel protections.

8. Notwithstanding this unequal treatment of commercial/ non-commercial FM stations, the NPRM makes no mention of certain "special circumstances" (terrain shielding) that could be applied in our region of the U.S. I know of two specific cases of isolated communities in Utah where no existing local commercial or non-commercial FM service exists. Both communities could definitely benefit from a micro radio or LPFM service. However, it appears as if the FCC promulgates only those technical rules easily applied to the most common terrain found in the U.S. Using minimum distance separations as the only means of deciding where the proposed LPFM's can exist does not take into consideration vast stretches of mountainous terrain in the intermountain west. **The FM translator service in the American West has demonstrated that terrain can be used to great advantage to provide valuable *low power* FM service to rural communities by taking advantage of directional antennas and terrain to re-use the same FM channels in topographically isolated valleys demonstrating maximum spectrum**

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[30] Notice of Proposed Rulemaking, MM Docket 99-25 (February 3, 1999) page 16 paragraph 40

efficiency.[31] If a secondary service can do it why not a proposed primary service?

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[31]The University of Utah is the licensee of 35 translators serving rural Utah and portions of adjacent states. The license call sign reflects the frequency occupied. Notice how many of them share the same channels.

K201BY - Delta, Millard County, Utah
K201CF - Ticaboo, Garfield County, Utah
K202AD - Orangeville and rural Emery County
K202AF - Randolph and Woodruff, Rich County, Utah
K202AW - Cedar City, Iron County, Utah
K202BG - Manti & Ephraim, San Pete County, Utah
K203AB - Coalville and Rural Summit County, Utah
K203CA - Milford, Beaver County, Utah
K203CL - Logan, Cache County, Utah
K208AG - Park City and Kimball Junction, Summit County, Utah
K208AQ - Price, Carbon County, Utah
K209BG - Huntsville, Weber County, Utah
K211BB - Kanab, Kane County, Utah
K211BJ - Toquerville, Washington County, Utah
K211BU - Parowan, Iron County, Utah
K211CK - Fillmore, Millard County, Utah
K211CL - Beaver, Beaver County, Utah
K211CP - Rural Emery County, Utah
K211CQ - Manila and Dutch John, Daggett County, Utah
K211CS - Monticello, San Juan County, Utah
K211CV - Vernal and Redwash, Uinta County, Utah
K211DH - Anabella and Glenwood, Sevier County, Utah
K213AA - Laketown and Garden City, Rich County, Utah
K213AM - St. George, Washington County, Utah
K213BC - Moab, Grand County, Utah
K216AC - Tropic and Rural Garfield County, Utah
K216BR - Heber City, Wasatch County, Utah
K218AA - Moab and Rural Grand County, Utah
K218AD - Washington and Rural Washington County, Utah
K220CM - Lyman, Wyoming - Licensed to Lyman TV Assoc, re-broadcasts KUER
K269BP - Monroe, Wayne, and Sevier Counties, Utah
K280BT - Milford and Rural Beaver County, Utah
K285BK - Tabiona and Myton, Duchesne County, Utah
K299AH - Pocatello, Bannock County, Idaho
K300AC - Washington, Washington County, Utah

9. The NPRM is internally inconsistent over an important technical issue around which the existence of the proposed LPFM service rotates, i.e., the elimination or reduction of 3rd adjacent channel protection. The NPRM states "...we are disinclined to extend reduced second- and third-adjacent channel protection standards to full power FM stations."[32] In the remainder of the NPRM the FCC proposes relaxation of adjacent channel protections as an essential part of "creating" channels for LPFM stations. Why is the FCC saying two different things in one NPRM?

10. EAS concerns: Power level not withstanding, if an LPFM station is considered to have the potential of delivering a valuable broadcast service, this means that people will be listening to it. At the very least ***all*** LPFM's should be required to monitor EAS activities and be a "non-participating" station. If not, this sets us up for the scenario of LPFM's staying on the air proceeding with life-as-usual, delivering no information about an emergency of which they know nothing. To leave LPFM's out of the EAS picture says that their audience is not worth informing or protecting in the event of an emergency. I agree with Harold Hallikainen in his reply comments.[33]

11. The commission seeks comment on whether section 74.1203 should be applied to LFPM stations. I believe the answer is yes, they should be required to shutdown if they cause

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[32] Notice of Proposed Rulemaking, MM Docket 99-25 (February 3, 1999) page 21 paragraph 50.

[33] REPLY COMMENTS: RM-9208, RM-9242, RM-9246, 22 July 1998, paragraph 38. *"Requiring stations to have EAS equipment would result in an improvement of EAS coverage (due to local emergency input) over the current operation of FM translators. To insure that EAS service to the public is not decreased, I would propose that licensed LPFM stations be required to fully meet the EAS requirements of full power stations."*

"impermissible interference".[34]

12. The commission seeks comment on alternatives to the auction procedure for resolving mutually exclusive applications which could "promote localism and community involvement".[35] The answer is fairly obvious, a residency requirement will substantially reduce the potential for competing applications. I agree with the comments of Francis A Ney, Jr.[36]

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[34] Notice of Proposed Rulemaking, MM Docket 99-25 (February 3, 1999) page 33 paragraph 90

[35] Notice of Proposed Rulemaking, MM Docket 99-25 (February 3, 1999) page 37 paragraph 107

[36] Comments to FCC in the matter of FCC RM-9242, RM-9208, RM-9246, and Community Radio Coalition, undated
"The owners of a low-power station should live within the community the station serves with no exceptions. Local ownership is what this entire set of proposals is all about."

13. In the Salt Lake City market we have an example of the ineffectiveness of an LPFM on channels second and third adjacent to full service stations. This example indicates that the "micro- radio" concept in an urban market has limited utility for the LPFM licensee. Below is a presentation of a portion of the reserved spectrum occupancy in our market.

Frequency MHz	Call Sign	Power Level	Service
89.1	KBYU	30 kw	Class C
89.3			
89.5			
89.7	K209CJ	.004 kw	Translator
89.9			
90.1	KUER	38 kw	Class C
90.3			
90.5	K213CQ	.010 kw	Translator
90.7			
90.9	KRCL	16.5 kw	Class C

The urban translators are running at power levels equivalent to the proposed "micro-radio" class LPFM station. The translator signals are not receivable on some home style receivers in the stereo mode even with a directional outdoor antenna *aimed at the translator site* or on mono clock radios. A digitally tuned radio probably can find and use these signals but that seemingly rules out what may be a significant proportion of the potential audience still using older analog tuned and clock/table radios. These translators were allowed because their useful signal strength contours do not reach populated areas, and correspondingly, their predicted interference contours don't cross the protected contours of the full service stations ***where there are listeners***. That is why they were deemed to be legal and were issued a license. Thus, the potential for a fairly significant unintended consequence, i.e. the "ghettoization" of the micro-radio service in urban markets, **markets where the potential for minority applicants is significant**. In this scenario, the FCC would be holding out a carrot to urban micro-radio

licensees, but the carrot contains no nourishment because the signal they can transmit cannot be used. Thus the fallacy of "creating channels" within the existing FM spectrum when a strong possibility exists that a large numbers of existing FM radios simply will not receive the low power service. I agree with the comments of Susquehannah Radio Corp.[37] **The existence of these "urban translators" also points out the tendency for a service designed for rural areas to be abused and employed in urban markets.**

15. If LPFM becomes a reality, it appears that consumers must eventually purchase new radios in order to be able to receive stations in the new more crowded FM band. If that is so, I propose that the best argument for getting people to buy new radios is an expanded FM band. With the advent of DTV and eventual retirement of analog TV service, the FCC could assign the spectrum currently occupied by the channel 6 TV service for a variety of communications services, including a new LPFM spectrum for the service proposed in this NPRM. The low power nature of this new FM service should make it even more practical to combine different types of radio services in one chunk of spectrum rather than mixing them in with full power FM's. Also a portion of the aircraft navigation spectrum above 108 MHZ, which will eventually be retired because GPS is taking over the role of electronic aircraft navigation, could also be used for this purpose. The FCC could then mandate receiver performance specifications that ensure improved signal separation performance and the listening public will be encouraged to purchase them because they'll get radios that offer the ability to receive more stations.

16. Regarding the use of broadcast auxiliary, STL (studio-transmitter link), and RPU

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[37] Comments to FCC in the matter of FCC RM-9208, April 23, 1998.
"This request for a low power FM broadcast service would have merit if spectrum were available; unfortunately, it is not. "

(remote production) frequencies for a proposed LPFM service, this is highly problematic in the urban environment. The most commonly used spectrum for aural STL applications is the 945-960 MHz band. It is common to find up to three stations re-using the same channel within this band. Mutual interference is avoided by taking advantage of the different directions between studio sites and transmitter sites and by using different antenna polarizations for microwave paths. Short of such adjustments, this scheme simply would not work. There simply aren't enough microwave channels to go around. The engineers for the broadcast companies in each market do an excellent job of coordinating the use of these channels and all the tricks of the trade have been employed to make the currently available spectrum work. To add LPFM licensees to the users of these channels would be extremely burdensome at best, if not totally impractical. Remote production is even more difficult to coordinate because the pattern of use is so mobile and ephemeral. In the Salt Lake City market up to 4 different broadcast organizations currently coordinate the use of one RPU channel for live remote broadcasts.[38] In at least one large market[39] known to this author nobody is even allowed to use the RPU spectrum unless they have first cleared their intended use with a full time frequency coordinator whose sole job is to make sure that users get a channel when, and only when, they need it. Adding non-professional LPFM users into this mix could lead to disastrous, literally, consequences. I argue against the assumption that the proposed LPFM stations have access to these channels in urban markets.

17. I am concerned should LPFM's, become a reality in small market situations, they could become unfair competition and pose a hardship to established commercial broadcasters. In many

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[38] 450.925 MHz users in Salt Lake City, Utah: KRCL, KCPW, KUER, KBER

[39] Los Angeles, California

cases these stations, (ethnic and otherwise), are doing an excellent job of community service. I agree with the comments of WLMI[40] in this regard. If the LPFM is allowed to operate as a commercial station, it creates an uneven playing field. It does not seem fair that commercial LPFM, perhaps offering a 24 hour service, will be allowed to compete with existing broadcasters whose pursuit and maintenance of a broadcast frequency is so much more cumbersome and financially demanding. I agree with the comments of WMTA[41] in this regard. Is it the intent of the FCC to clear up some of the current congestion on the AM band through this mechanism?

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[40] Comments to the FCC in the matter of RM-9208 and RM-9242, April 24, 1998.

[41] Comments to the FCC in the matter of RM-9242, April 24, 1998.
"If the FCC establishes a low power service such as proposed in RM 9242 the effects on existing daytime radio stations would be substantial and negative. How can the FCC justify creating a new low power FM service to compete with small town AM radio stations, most of which must go off the air at sundown or operate at a ridiculously low power level with a coverage area much less than that proposed in RM 9242 for the new low power FM's.

18. The FCC seems to be drawing upon its experience with low power television (LPTV) and applying it to the proposed LPFM. service.[42] LPTV was visualized as being an economical means for small communities to create a local television service. While this has no doubt happened in some cases, our local experience indicates a contrary result. Out of 21 LPTV's licensed in Utah, 14 are concentrated in the most populous urban areas.[43] **Although it may have been the FCC's intent to create a rural service mechanism with LPTV, the effect has been just the opposite.** The number of TV translators (580) serving rural Utah, 80 % of the area of the state, vastly outnumbers the LPTV stations (7). Additionally, the LPTV service was created

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[42] Notice of Proposed Rulemaking, MM Docket 99-25 (February 3, 1999) page 32 paragraph 88, page 33 paragraph 93

[43] Low power TV stations licensed in Utah. **Urban stations in bold print.**

KUCL-LP Ch 26 Salt Lake City
K36CJ Ch 36 Salt Lake City
K38CN Ch 38 Salt Lake City
K46BJ Ch 46 Salt Lake City
K48EJ Ch 48 Salt Lake City
KUBX-LP Ch 58 Salt Lake City
K66FN Ch 66 Salt Lake City
KSVN-LP Ch 21 Ogden
KTLE-LP Ch 39 Ogden
K58FT Ch58 Ogden *not on the air, Construction Permit*
K64CJ Ch 64 Ogden
K21EY Ch21 Provo *not on the air, Construction Permit*
K34DW Ch34 Provo
K60GA Ch60 Provo *not on the air, Construction Permit*
K45AX Ch 45 Park City, Summit County *not on the air, Construction Permit*
K61CF Ch61 Rural Duchesne County
K26EM Ch 26 Emery County
K21ND Ch12 Kanab, Kane County, Utah
KWWB-LP Ch 45 St. George, Utah
KVBT-LP Ch 41 St. George, Utah
KDLU-LP Ch 26 St. George, Utah

when the spectrum space existed, i.e. there were adequate empty spaces on the TV dial for the additional signals, without requiring people to purchase new TV receivers to pick up the additional stations. The LPFM proposal is coming forth under exactly the opposite conditions. The LPTV experience indicates that a low power service will create more signals in urban markets, where the money is. The current move to allow LPTV stations to increase power[44] points out an additional unsettling precedent. If LPTV can be allowed to operate at higher power levels than originally intended what is to prevent the same from happening to LPFM? Can we not safely assume similar pressures to "boost LPFM power" once the service is established ?

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[44]PETITION FOR RULEMAKING FOR "CLASS A" TV SERVICE, The Community Broadcasters Association, RM-9260, September 30, 1997, amended March 18, 1998.

CONCLUSION

The creation of a new low power FM broadcast service, as proposed, presents far more negative, than positive, potential impacts. The proposed service threatens the technical integrity of the FM broadcast band. It proposes to place more FM signals closer together than can be separated by all but the newer and narrower band radios. Current adjacent channel protections are based upon FM receiver performance, specifications that still apply to an unknown proportion of receivers currently in use. The proposed LPFM not only threatens to make those radios useless but also threatens to degrade the audio quality receivable on newer, more selective, FM radios.

The signals that LFPM's would be allowed to transmit in urban markets may have very limited utility because many existing receivers simply cannot separate the weaker signals from the stronger. **The LPFM licensee may not be allowed to participate in IBOC/DAB because of the potential bandwidth limitation imposed on the LPFM.** It sets up the potential future quandry : What should we do with all these LPFM's that are preventing the implementation of IBOC/DAB ? LPFM might also prevent the implementation of DAB (5.1 channel) a feature we may deem necessary for digital radio to succeed. **It also could place an unnecessary burden on the implementation of IBOC/DAB in that it requires the U.S. population to purchase new radios, [to differentiate LPFM] from existing services, then newer radios still, to receive to digital broadcasts.** The NPRM is internally inconsistent with regard to current technical regulations and requirements and appears at odds with certain stated FCC and Congressional policy objectives; namely service to those living in rural America. **This proposed service poses a grave threat to FM translators that serve a**

large part of the rural U.S. Service that commercial broadcasters s sometimes cannot or will not provide. It also threatens to be an unfair hardship to small market daytime only AM broadcasters whose rely on local small market economies to stay in business.